

1. IDENTIFICATION

| | |
|----------------------------|--|
| Product Name | Chondroitin Sulphate Sodium (Chicken derived) |
| Other Names | No Data Available |
| Uses | No Data Available |
| Chemical Family | No Data Available |
| Chemical Formula | No Data Available |
| Chemical Name | Chondroitin Sulphate Sodium (Chicken derived) |
| Product Description | No Data Available |

Contact Details of the Supplier of this Safety Data Sheet

| Organisation | Location | Telephone |
|-------------------------|--|------------------|
| Redox Pty Ltd | 2 Swettenham Road Minto NSW 2566 Australia | +61-2-97333000 |
| Redox Pty Ltd | 11 Mayo Road Wiri Auckland 2104 New Zealand | +64-9-2506222 |
| Redox Inc. | 3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA | +1-424-675-3200 |
| Redox Chemicals Sdn Bhd | Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia | +60-3-5614-2111 |

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

| Organisation | Location | Telephone |
|----------------------------|-----------------|--|
| Poisons Information Centre | Westmead NSW | 1800-251525 131126 |
| Chemcall | Australia | 1800-127406 +64-4-9179888 |
| Chemcall | Malaysia | +64-4-9179888 |
| Chemcall | New Zealand | 0800-243622 +64-4-9179888 |
| National Poisons Centre | New Zealand | 0800-764766 |
| CHEMTREC | USA & Canada | 1-800-424-9300 CN723420 +1-703-527-3887 |

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not scheduled

Globally Harmonised System

Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

| Chemical Entity | Formula | CAS Number | Proportion |
|---|-------------------|------------|------------|
| Chondroitin Sulphate Sodium (Chicken derived) | No Data Available | 9082-07-9 | 100 % |

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed

Rinse mouth with water. Give plenty of water to drink provided victim is conscious. Do NOT induce vomiting. Seek medical attention immediately. Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Eye

Immediately flush eyes with plenty of water for 15 minutes, holding eyelids open. In all cases of eye contamination, it is a sensible precaution to seek medical advice. Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Skin

Remove contaminated clothing. Wash affected area with copious quantities of water for at least 15 minutes. If irritation persists, seek medical attention. Wash contaminated clothing before reuse. Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Inhaled

Remove victim from exposure to fresh air - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm and at rest. Seek immediate medical advice. Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

Advice to Doctor

Treat symptomatically based on judgement of doctor and individual reactions of patient. Overdose Treatment: For current information about the treatment of overdose, consult a certified Regional Poison Control Center by calling the number listed in your local telephone directory.

Medical Conditions Aggravated by Exposure

Hypersensitivity to material.

5. FIRE FIGHTING MEASURES

General Measures

As with all fires, evacuate personnel to a safe area. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk.

Flammability Conditions

May be combustible at high temperature.

Extinguishing Media

Use water spray, dry chemical powder, carbon dioxide or appropriate foam.

Fire and Explosion Hazard

This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential build up of static electricity.

| | |
|---|--|
| Hazardous Products of Combustion | When heated to decomposition material emits toxic fumes of SO _x . Emits toxic fumes under fire conditions. |
| Special Fire Fighting Instructions | Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment. |
| Personal Protective Equipment | Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. |
| Flash Point | No Data Available |
| Lower Explosion Limit | No Data Available |
| Upper Explosion Limit | No Data Available |
| Auto Ignition Temperature | No Data Available |
| Hazchem Code | No Data Available |

6. ACCIDENTAL RELEASE MEASURES

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|---|---|
| General Response Procedure | Avoid accidents, clean up immediately. Slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Avoid generating dust. Stop leak if safe to do so. Isolate the danger area. Use clean, non-sparking tools and equipment. Wear approved respiratory protection, chemically compatible gloves and protective clothing. |
| Clean Up Procedures | Contain and sweep/shovel up spills with dust binding material or use an industrial vacuum cleaner. Transfer to a suitable, labelled container and dispose of promptly. |
| Containment | Stop leak if safe to do so. Isolate the danger area. |
| Decontamination | Wash spill site. |
| Environmental Precautionary Measures | Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. |
| Evacuation Criteria | Evacuate all unnecessary personnel. |
| Personal Precautionary Measures | Personnel involved in the clean up should wear full protective clothing as listed in section 8. |

7. HANDLING AND STORAGE

| | |
|------------------|---|
| Handling | Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Operations should be carried out in an efficient fume hood or equivalent system. Remove contaminated clothing and wash before reuse. |
| Storage | Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Store at room temperature. This product is not classified dangerous for transport according to The Australian Code for the Transport of Dangerous Goods By Road and Rail. |
| Container | Store in original packaging as approved by manufacturer. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

| | |
|--------------------------------------|--|
| General | No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). However, the exposure standard for dust not otherwise specified is 10mg/m ³ (for inspirable dust) and 3mg/m ³ (for respirable dust). |
| Exposure Limits | No Data Available |
| Biological Limits | No information available on biological limit values for this product. |
| Engineering Measures | A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. |
| Personal Protection Equipment | RESPIRATOR: None required. The use of an approved mask is recommended (AS1715/1716). |

EYES: Safety glasses with side shields (AS1336/1337).
HANDS: Wear rubber gloves (AS2161).
CLOTHING: Long-sleeved protective clothing and safety footwear (AS3765/2210).

Work Hygienic Practices

Wash hands before eating.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| Physical State | Solid |
| Appearance | Pellets |
| Odour | Sweet, creamy scent |
| Colour | Green |
| pH | No Data Available |
| Vapour Pressure | No Data Available |
| Relative Vapour Density | No Data Available |
| Boiling Point | No Data Available |
| Melting Point | No Data Available |
| Freezing Point | No Data Available |
| Solubility | Complete |
| Specific Gravity | No Data Available |
| Flash Point | No Data Available |
| Auto Ignition Temp | No Data Available |
| Evaporation Rate | No Data Available |
| Bulk Density | No Data Available |
| Corrosion Rate | No Data Available |
| Decomposition Temperature | No Data Available |
| Density | No Data Available |
| Specific Heat | No Data Available |
| Molecular Weight | No Data Available |
| Net Propellant Weight | No Data Available |
| Octanol Water Coefficient | No Data Available |
| Particle Size | No Data Available |
| Partition Coefficient | No Data Available |
| Saturated Vapour Concentration | No Data Available |
| Vapour Temperature | No Data Available |
| Viscosity | No Data Available |
| Volatile Percent | No Data Available |
| VOC Volume | No Data Available |
| Additional Characteristics | No Data Available |
| Potential for Dust Explosion | This material is assumed to be combustible. As with all dry powders it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential build up of static electricity. |
| Fast or Intensely Burning Characteristics | No Data Available |
| Flame Propagation or Burning Rate of Solid Materials | No Data Available |
| Non-Flammables That Could Contribute Unusual Hazards to a Fire | No Data Available |
| Properties That May Initiate or Contribute to Fire Intensity | No Data Available |
| Reactions That Release Gases or Vapours | No Data Available |

Release of Invisible Flammable Vapours and Gases No Data Available

10. STABILITY AND REACTIVITY

Chemical Stability Product is stable under normal conditions of use, storage and temperature.

Conditions to Avoid Avoid exposure to moisture.

Materials to Avoid No Data Available

Hazardous Decomposition Products When heated to decomposition material emits toxic fumes of SO_x. Emits toxic fumes under fire conditions.

Hazardous Polymerisation Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

General Information Oral Rat: LD50: > 10 grams/kg
Oral Mouse: LD50: > 10 grams/kg

Adverse Effects: Adverse effects may include nausea or other gastrointestinal upset. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: N/F

Acute: Possible eye, skin, gastrointestinal and/or respiratory tract irritation.

Chronic: Possible hypersensitisation

Listed as a Carcinogen by:
NTP: No
IARC: No
OSHA: No

EyeIrritant May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

Ingestion Ingestion may cause nausea or other gastro-intestinal upset. Possible allergic reaction. No adverse effects expected, however, large amounts may cause nausea and vomiting.

Inhalation Inhalation may cause respiratory tract irritation and possible allergic reaction.

SkinIrritant May cause skin irritation with possible allergic reaction.
Repeated or prolonged skin contact may result in irritation.

Carcinogen Category No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity No Data Available

Persistence/Degradability No Data Available

Mobility No Data Available

Environmental Fate No Data Available

Bioaccumulation Potential No Data Available

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

Special Precautions for Land Fill Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

| | |
|-----------------------------|----------------------------|
| Proper Shipping Name | CHONDROITIN SULFATE SODIUM |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |

Land Transport (Malaysia)

ADR

| | |
|-----------------------------|----------------------------|
| Proper Shipping Name | CHONDROITIN SULFATE SODIUM |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |

Land Transport (New Zealand)

NZS5433

| | |
|-----------------------------|----------------------------|
| Proper Shipping Name | CHONDROITIN SULFATE SODIUM |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |

Land Transport (United States of America)

US DOT

| | |
|-----------------------------|----------------------------|
| Proper Shipping Name | CHONDROITIN SULFATE SODIUM |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |

| | |
|--------------------------|-------------------|
| Pack Group | No Data Available |
| Special Provision | No Data Available |

Sea Transport

IMDG Code

| | |
|-----------------------------|----------------------------|
| Proper Shipping Name | CHONDROITIN SULFATE SODIUM |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |
| EMS | No Data Available |
| Marine Pollutant | No |

Air Transport

IATA DGR

| | |
|-----------------------------|----------------------------|
| Proper Shipping Name | CHONDROITIN SULFATE SODIUM |
| Class | No Data Available |
| Subsidiary Risk(s) | No Data Available |
| UN Number | No Data Available |
| Hazchem | No Data Available |
| Pack Group | No Data Available |
| Special Provision | No Data Available |

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

| | |
|---------------------------------------|---|
| Dangerous Goods Classification | NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code) |
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15. REGULATORY INFORMATION

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|--------------------------------|-------------------|
| General Information | No Data Available |
| Poisons Schedule (Aust) | Not scheduled |

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

| | |
|----------------------|---------------|
| Approval Code | Not Hazardous |
|----------------------|---------------|

National/Regional Inventories

| | |
|-------------------------|----------------|
| Australia (AICS) | Not Listed |
| Canada (DSL) | Not Determined |
| Canada (NDSL) | Not Determined |

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|---|----------------|
| China (IECSC) | Not Determined |
| Europe (EINECS) | Not Determined |
| Europe (REACH) | Not Determined |
| Japan (ENCS/METI) | Not Determined |
| Korea (KECI) | Not Determined |
| Malaysia (EHS Register) | Not Determined |
| New Zealand (NZIoC) | Not Determined |
| Philippines (PICCS) | Not Determined |
| Switzerland (Giftliste 1) | Not Determined |
| Switzerland (Inventory of Notified Substances) | Not Determined |
| Taiwan (NCSR) | Not Determined |
| USA (TSCA) | Not Determined |

16. OTHER INFORMATION

| | |
|------------------------------|---|
| Related Product Codes | CHOSUL4700 |
| Revision | 1 |
| Revision Date | 20 Jul 2015 |
| Reason for Issue | New SDS |
| Key/Legend | <p>< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO₂ Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH₂O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours. LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. ltr or L Litre m³ Cubic Metre mbar Millibar mg Milligram mg/24H Milligrams per 24 Hours mg/kg Milligrams per Kilogram mg/m³ Milligrams per Cubic Metre</p> |

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight